2020-04-27

A Critical Look at "Use or Lose"

Candreva, Philip

Monterey, California. Naval Postgraduate School

http://hdl.handle.net/10945/64766

SYM-AM-20-062

PROCEEDINGS
OF THE
SEVENTEENTH ANNUAL ACQUISITION RESEARCH SYMPOSIUM

Acquisition Research:
Creating Synergy for Informed Change

May 13–14, 2020

Published: April 13, 2020

Prepared for the Naval Postgraduate School, Monterey, CA 93943.

The research presented in this report was supported by the Acquisition Research Program of the Graduate School of Defense Management at the Naval Postgraduate School.

To request defense acquisition research, to become a research sponsor, or to print additional copies of reports, please contact any of the staff listed on the Acquisition Research Program website (www.acquisitionresearch.net).

A Critical Look at "Use or Lose"

Philip J. Candreva is Senior Lecturer of Budgeting and Public Policy at the Naval Postgraduate School and Adjunct Professor of Law at Monterey College of Law. Prior to joining academia, he completed a career as a Navy Supply Corps officer. He holds a BS in economics, an MS in public financial management, and a JD. His teaching and research interests are in the areas of national defense budgeting and the intersection of law, public administration, and public budgeting. He has taught 130 courses to more than 3,000 students and authored 12 peer-reviewed journal articles and two books. [pjcandre@nps.edu]

Abstract

Recent research approaches the "use or lose" (UorL) phenomenon in public budgeting as an economic question and have employed principal–agent models that oversimplify the situation, resulting in recommendations that would likely be unworkable in practice. This paper views UorL as a governance problem rather than an economic one. By considering the laws, administrative rules, organizational structures, and institutional norms driving UorL behavior, it paints a more complete picture of the phenomenon. The paper begins with a more refined definition of UorL, reviews the literature for empirical evidence of it, describes the governance factors that influence it, critically evaluates the solutions proposed in the literature, and then makes new recommendations to improve the governance of programs and agencies to achieve better programmatic and financial outcomes.

Introduction

"If we are able to find more economical ways to do our work, and still meet the objective, we run the risk of a smaller budget. Why are organizations who are good stewards penalized for it?" asked an experienced federal financial manager in a public budgeting class.

This simple comment and question are simultaneously insightful and sad. It provides a concise insight into a prevailing belief about public budgeting decisions and the values managers ascribed to those decisions. It is sad because ideals of stewardship should encourage and reward more efficient ways to meet an objective, but the logical consequence of a budget adjustment for good stewardship is viewed as a punishment rather than as appropriate.

This paper is a critical analysis of the "Use or Lose" phenomenon and its treatment in the literature. Its goals are seen in its structure. First, a more detailed definition of the Use or Lose (UorL) phenomenon is proposed than has been used in past literature. Next, it explores published empirical evidence of that definition. From there, the paper considers governance factors affecting UorL behavior: the laws, administrative rules, organizational structures and institutional norms. That section concludes that year-end spending spikes are the logical consequence of a rational adaptation by managers to their environment and that such adaptation can be, but is not necessarily, problematic. The paper concludes by critically evaluating solutions that have been proposed in the literature and offers some new ideas.

This paper adds to the literature on UorL in four ways. First, it provides a more complete definition of the phenomenon than has been previously used. By examining the problem through a governance lens rather than an economic one, it provides a richer description of the reasons why UorL behavior exists. Third, it critiques the presumption in the literature that year-end spending spikes are an intrinsic problem. Finally, by considering this a governance matter, it critically evaluates the solutions that have been commonly proposed and offers new ideas.

A word about scope. This paper is written from the perspective of the U.S. federal government so it is focused on obligation-based (i.e., encumbrance-based) accounting and expenditures irrespective of revenue, but some ideas are generalizable to state and municipal governments. Given the author's background, it employs Department of Defense (DoD) examples, but many lessons are generalizable to the rest of the federal government. The focus is on one-year appropriations, but some of the concepts are adaptable to multiyear appropriations and the operating result expectations of revolving funds.

Defining "Use or Lose"

The literature adopts a variety of definitions of UorL, the most common of which is that it is the incentive to spend all of the budget prior to the end of the fiscal year when funds will revert to the Treasury and the agency consequently risks facing a cut to future budgets (Dietrichson & Ellegård, 2015; Eichenauer, 2017; Hurley, Brimberg, & Fisher, 2014; Liebman & Mahoney, 2018). Those who have considered causes have identified either precautionary savings (Liebman & Mahoney, 2018), procrastination (Dietrichson & Ellegård, 2015), or inadequate planning in ineffective bureaucracies (Eichenauer, 2017).

I adopt the following definition of UorL:

> *The pressure to obligate all annual budget authority allocated to an organization(al unit) in time t causes a wasteful year-end spike in obligations to avoid a perceived consequence in time t+1 (or t+2). The consequence may be an administrative sanction for the lost opportunity, or a cut to a future budget because of a presumption that the unobligated funds were not needed.*

This definition includes six key facts: there is pressure (P) to obligate all allocated budget authority (O), there is a consequence to not obligating all the budget (C), there is a year-end increase in obligations (S), those purchases are wasteful (W), and any year-end surplus is presumed evidence of a lack of need (N).

My definition differs in two important ways from those commonly found in the literature. First, most definitions apply a principal–agent model and limit the actors to the governmental agency and congress or a state legislature as the principal (Baumann, 2015; Hurley et al., 2014; Liebman & Mahoney, 2018). In this paper, I propose that the entire agency is not the proper unit of analysis for the agent, but rather the individual program manager within an agency. There are principals other than the legislature that pressure programs and impose consequences for failing to spend. The leaders of the Navy, for example, do not make daily spending decisions; rather spending decisions are made by individual ships, squadrons, installations, recruiting offices, R&D centers, training commands, and program offices. Each of them is worried that their immediate superior will impose consequences for not spending and each of those commanders is worried their respective commander will do likewise. There may be five to seven layers of nested principal–agent relationships involved, not just one. (To their credit, Hurley et al. [2014] model a hierarchy of agents.) But there are also interorganizational relationships that drive UorL behavior such as when individual commands negotiate the disposition of balances on expiring reimbursable transactions.[1] Managing a budget in the DoD is more of a network of relationships than a duality or hierarchy of principal–agent relationships.

The second difference in my definition is grounded in the important fact that unused budget authority does not revert to the Treasury, at least at the federal level. Maybe those

[1] A reimbursable transaction is a contract between government organizations. Near the end of the fiscal year, the two organizations typically discuss whether to return any unused balances or simply use them up. While returning unused funds is the proper thing to do according to a strict reading of fiscal law, the buying organization may have no need for the residual, which is often a small amount, and will simply allow the supplying organization to use it.

authors (Eichenauer, 2016; Fitchner & Greene, 2014; Hurley et al., 2014; Liebman & Mahoney, 2018) are simply employing a colloquial expression, but I do not think so because their models assume unused budget authority has zero utility. This belief is unfortunate and inaccurate. “An appropriation does not represent funds extracted from the Treasury; it is merely the authority to bind the Treasury to make a payment under proper circumstances. What expires is the authority to bind the government. If that authority is not exercised, the Treasury never moves a cent.” (Candreva, 2017, p. 304). Budget authority that remains unobligated at the end of the fiscal year does not represent an entirely lost opportunity. What expired was the authority to enter into *new* obligations; the manager of those funds is still accountable for managing them and may still (and sometimes must) adjust existing obligations. As demonstrated later, most of the lost opportunity is realized after the appropriation expires.

Empirical Evidence or Urban Myth?

Let us now examine whether any of the elements in the definition of UorL have been proven or if this is merely a figment in the collective mind of government managers.

Evidence of Pressure to Spend

Is there evidence of pressure on fund holders to obligate all of their funding (P)? In the DoD, both department and individual military service comptrollers promulgate expected obligation rates for each appropriation title (Defense Acquisition University [DAU], 2017). Tables F through H of the annual defense budget Financial Summary Tables report to Congress historical and forecasted obligation and outlay rates. Section 1003 of the FY2015 National Defense Authorization Act (Pub. L. 113-291) requires the DoD to annually report to Congress balances carried forward in the various accounts. Annual appropriation acts typically contain language requiring that 80% of the funds be obligated before the last two months of the fiscal year (see, for example, Consolidated Appropriations Act, 2020, Div. A, §8004). For the last several years, Congress has required the DoD to provide quarterly O&M budget execution data (e.g., Senate Report, 115-290, p. 32). Many budget requests specify a rate of obligations or include target dates for awarding major contracts. During mid-year reviews, programs are scrutinized for their progress against these benchmarks and plans. The central budget office of each service continuously tracks service-wide obligations against a consolidated plan. (Candreva, 2017, pp. 321–323)

Presently, the Navy has management programs called “Perform to Plan” and “Process to Improve Expenditure Efficiency” with the express goal of improving the accuracy of budget execution in relation to the budget proposed (Navy, 2018). While some of these efforts are focused on improving budget forecasting, they also address unused budget authority. Taken as a whole, these plans, management programs, budget content, and congressionally mandated reports provide ample evidence that there is pressure to fully expend the funds provided.

Evidence of Obligating all of the Budget Authority

For the most part, the services are obligating nearly all of their annual O&M funding (O) by the end of the fiscal year. Examining the Fourth Quarter O&M Budget Execution Data reports to Congress for Fiscal Years 2015–2019 reveals that in the aggregate, only 0.40% of the O&M funds were unobligated on September 30 (DoD, 2020). These figures are for the active force only and exclude the few O&M accounts with longer than a one-year obligation period.

In dollar terms, the average aggregate lost opportunity was $800.2 million per year on a base of $200.5 billion, illustrated in Figure 2. There was a fair amount of variance from year to year. The five-year averages by service were: Army (0.26%), Navy (0.27%), Marine Corps (0.24%), Air Force (0.48%), and Defense-wide (0.68%; DoD, 2020). While $800 million per year is a lot of money, that is spread over hundreds of individual accounts.

On the surface, it appears that funds are thoroughly executed—99.6%. However, other evidence suggests spending is not that thorough. By the time these appropriations close—five years after they expire for obligation purposes—the execution rate drops to about 97%. According to Navy data, appropriations that expired in 2010 and closed in 2015 dropped from 99.3% obligated to 97.3%; those that expired in 2011 and closed in 2016 went from 99.2% obligated down to 97.2%, and those that expired in 2012 and closed in 2017 went from 98.8% down to 97.1% (Navy, 2018). If an additional 2% of these appropriations are not actually expended, then the potential lost opportunity grows from $800 million across the DoD to about $4 billion annually.

Thus, we can conclude that while appropriations are nearly fully obligated at the time they expire, those obligations may have been overstated or subsequently deemed unnecessary, such that 2–3% of the appropriation will never expend from the Treasury.

Evidence of Consequences for Not Spending

Does that pressure result in consequences (C)? There is little in the academic literature providing empirical evidence for this. Dietrichson and Ellegård (2015) found a higher rate of dismissal of Swedish managers following noncompliance to the budget, so there is evidence of administrative sanctions. Anecdotally, managers discuss the fear of consequences (Jones, 2005), but hard evidence at the intra-agency level is not in the literature.

There is evidence of reallocation. Annually, the DoD transfers 3–5% of the budget among accounts—but never do they rationalize the transfer as “protecting under-obligated appropriations from the future budget axe.” The department always explains that a greater need elsewhere in the department motivated the reallocation (DoD, 2019). And that is undoubtedly true; the fact that the source of the funding may have been an underexecuting program is subsumed in the more appropriate discussion of shifting priorities.

At the congressional level, the Fiscal Year 2019 Defense Appropriations Conference Report provides evidence of subsequent year consequences. Congress reduced various accounts under the military personnel titles a total of $301,280,000 for historical underexecution and another $2,500,000 for projected underexecution. In the operation and maintenance titles, Congress cut $1,085,149,000 for historical underexecution and $263,227,000 for projected underexecution (H.R. Rep. No. 115-952, 2018). Congress not only cut the FY2019 appropriation for past underspending, they cut the budget because they believed the department would continue to underspend.

Evidence of a Year-End Spending Spike

Is there an end-of-year spending spike (S)? Yes. This is the one aspect of UoL that has recently been well-researched and documented. Liebman and Mahoney (2018) examined 14.6 million purchases by the federal government from 2004 to 2009 and found that contract awards in the last week of the fiscal year were five times the average rate of the rest of the year. They looked in depth at information technology (IT) spending and found that agencies contracted for 12.3% of IT spending in the last week of the year. Baumann (2019) found that U.K. and Northern Ireland governments spent two to three times more in the final month of the fiscal year than the average month. Hurley et al. (2014) found Canadian defense spending spikes in the final month of the year. Fitchner and Greene (2014) used contract data from USASpending.gov for the period 2000–2013 to show an end-of-year spike in contracts. Jones and McCaffery (2008) looked at DoD operation and maintenance spending and found a spike in obligations in the first month of each fiscal quarter and a large spike in the last month of the year. Without doubt, there is strong empirical evidence that one-year appropriations experience a spike in obligations at the end of the fiscal year.

Evidence of Wasteful Year-End Spending

This leads us to examine our fourth fact. Is that spike in spending wasteful (W)? Before looking at the evidence, it is important to note that there is a presumption in much of the literature that simply having a spike—regardless of what is purchased—is wasteful (Liebman & Mahoney, 2018, p. 1). Other studies assumed that an 8.33% obligation rate per month is efficient and any deviation is inefficient (Fitchner & Greene, 2014; Hurley et al., 2014). This assumption is simply not logical.

The problem with this is obvious if one merely reflects on their personal spending patterns. A household receives the benefits of electricity, garbage collection, and homeowners' associations evenly throughout the year, but the electric bill is typically paid monthly, the garbage bill quarterly, and the HOA dues annually. The quarterly and annual payments cause spikes in "spending," but the benefit received is evenly distributed. Studies of end-of-year spending have looked at contract awards—the date a contract is signed—not the period during which the contract is performed nor the timing of payments for the goods or services received. Government contracts work in similar fashion to household garbage and HOA fees. A single contract award for a year of service looks like a spike in "spending" but yields a continuing benefit.

The government receives no benefit until an obligation is made (contract signed), and the amount and timing of those obligations may be lumpy while the benefit is smooth and continuous. An even pace of 8.33% obligations per month is logical if the agency is primarily using its budget on government labor, but these studies expressly did not look at labor; they only looked at contract awards. Some of the research also fails to consider that federal law permits a contract under an annual appropriation for a year of service that begins and ends on dates that do not correspond with the fiscal year (10 U.S. Code § 2410a). A one-year contract for a severable service may specify, for example, a period of performance from April 1 to the following March 31 even though the appropriation runs from the prior October 1 to September 30.

It also appears some researches have confounded the concepts of obligations and expenditures. A contract for goods or services may occur only once (the *obligation*) and payments may occur once or periodically (the *expenditures*). Studies have not been precise with this concept causing confusion. Fitchner and Greene (2014) said they measured "obligated monthly contract expenditures based on the date the contract is signed" but there is no expenditure on that date, only an obligation. They further say they "summed all obligated amounts by fiscal year to determine each year's total contract expenditures" (Fitchner & Greene, 2014, p. 8). The sum of obligations will not equal the sum of expenditures unless all contracts are fully completed and paid during the fiscal year, which is highly unlikely. And Eichenauer (2016) explored "reasons of uneven government expenditures" (p. 62) although she measured obligations.

Nevertheless, studies have shown that year-end obligations procure lower-value services than purchases that occur earlier in the year. Using CIO evaluations of project quality, Liebmann and Mahoney (2018) convincingly showed that IT project contracts awarded at the end of the year are of lower quality than IT contracts awarded earlier in the year. But should lower quality be equated with waste?

A reasonably proficient manager will prioritize spending to ensure the highest quality projects are funded first and lower quality projects are pursued as funding is available. Lower year-end spending quality may be a better measure of management's ability to prioritize the use of resources than it is of waste. Harvard's Bob Behn discussed a city using year-end funds to purchase tires for its vehicle fleet—a purchase he shows was less wasteful than buying them in steady increments (Jones, 2005, pp. 150–151).

Hurley et al. (2014) deal with this idea of prioritization by recognizing that spending decisions on high and low priority efforts are made simultaneously in a context of cost uncertainty and this leads to inefficient spending. They show that the theoretically most efficient allocation will naturally lead to some unobligated balances. Thus, the pursuit of 100% obligations results in an economically suboptimal allocation of resources. However, they do not consider in their economic analysis the political cost of leaving unobligated funds on the table or legal proscriptions on deliberately not spending.

The amount of funding that is deobligated in the subsequent fiscal year might better capture waste, but it is still a problematic one. A hastily and conservatively priced contract awarded late in the fiscal year in an effort to use up expiring budget authority is prone to be partially reversed in the subsequent year (e.g., the contract estimated at $2 million may only cost $1.8 million). Hasty year-end requisitions for spare parts may be canceled when a ship or squadron has an alternative way to fix broken equipment. This dynamic is what causes the 99.6% obligation rate to drop to about 97%.

Principals' Presumption that Unspent Funds are Unneeded

Finally, let us look at the presumption by the principal that unspent budget authority by the agent is not needed (N). The literature on UorL tends to presume this is true, but there have been no empirical tests and none of the literature I have found made an attempt to explore it.

A truism of public budgeting is that requirements always exceed resources. Schools need smaller class sizes, better teacher pay, and newer materials. Cities need to fix aging infrastructure and to better serve the underprivileged. A military needs newer and better weapons to address the enemies' advances in technology. A cure for cancer eludes us. It is incredible that any funds would ever be left over, yet they are.

From the spender's perspective, the difference between a need and a want may be indecipherable and does not matter here. From the allocator's perspective, "did not need" probably was meant to convey "did not manage effectively," since there is no shortage of things to spend the funds on. The distinction is important because the appropriate remedies for correcting a resource misallocation are different from those appropriate to correct program mismanagement.

I did find one bit of evidence to the contrary. The congressional cuts noted previously for underexecution were in addition to other cuts for unjustified program growth and for budgeting in advance of need (another $1,442,000; H.R. Rep. No. 115-952, 2018). Because unjustified needs were categorized separately from unspent funds, one may conclude that Congress does not hold this presumption.

To summarize, there is evidence of pressure to spend, nearly all is spent by the end of the fiscal year, but a portion is subsequently deobligated creating a lost opportunity, and there is some anecdotal evidence of consequences for underspending. There is strong evidence of a year-end spending spike on things that are of lower value. There does not appear to be strong evidence for the presumption that unused authority was not needed, but simply may have been mismanaged.

Governance Factors Affecting Use or Lose Behavior

The extant literature on UorL views the phenomenon as an agency problem, one in which an executive agency's goals and actions are misaligned with Congress's desired outcomes. This approach is incomplete for a few reasons mentioned earlier and others addressed below. This section of the paper will define governance and explain why it may be more useful than an agency approach in understanding the UorL phenomenon.

Both the private and public sectors describe governance as something that occurs above the management layer of an organization that serves to control and direct management. “Governance is ultimately concerned with creating the conditions for ordered rule and collective action” (Stoker, 1998). In a corporate setting, we may think of a board of directors as governing the corporation by controlling the actions of management. In government, it gets a little more complex because a principal function of government is to govern. But government also manages or administers programs that need to be governed. Our scope here is the management of government resources, and the controls on those managers.

For purposes of this paper, I will adopt a slightly modified version of the definition in Heinrich and Lynn (2000, p. 3): *Governance is the regime of laws, administrative rules, organizational structures, and institutional norms that constrain, prescribe, and enable government activity*. This is a more complete approach than agency theory since agency is concerned with the roles of incentives and monitoring to minimize differences in relative outcomes. A governance framework categorizes incentives and monitoring into four sources and describes the structure of the conditions under which the agent works. This framework structures a critical evaluation of the proposed interventions to UorL behavior in the literature and offers some new ones.

<u>Laws</u>

The earlier section examining the evidence for UorL identified several legal elements that govern federal spending:

- Appropriations enable spending, but also constrain that spending by allocating it to bounded accounts.
- Appropriation conference reports explain adjustments based on underexecution or unjustified need, signaling desired behavior.
- Authorizations enable programmatic activity, but also limit the contours of them.
- Federal law permits the use of annual appropriations for annual service contracts whose terms do not synchronize with the fiscal year.

Appropriations are laws that provide budget authority that enables, prescribes, and constrains administrative behavior. Nothing can be spent in the absence of an appropriation so they enable programs to enter into financial obligations. “The established rule is that the expenditure of public funds is proper only when authorized by Congress, not that public funds may be expended unless prohibited by Congress” (*United States v. MacCollom*, 426 U.S. 317 [1976]).

In some cases, the appropriation prescribes what the administrator must do by requiring certain actions. For example, the FY2015 Forest Service appropriation provided about $2.3 billion for wildland fire management and earmarked $65,000,000 for acquiring firefighting aircraft. The Forest Service did not request funding for these tankers; Congress added it. Approximately a year after the Forest Service received the appropriation, the balance remaining in the appropriation was less than $65 million, but they had not yet acquired the tankers, thereby incurring a violation fiscal law because they obligated those funds for other needs (Poling, 2017a).

In other cases, appropriations constrain or forbid behavior. The key constraints are the purpose for which the funds were appropriated, the dollar amount available, and the time period during which new obligations are permissible. Just as appropriation language required the Forest Service to acquire tankers, language may forbid actions. Since 1989, the annual defense appropriation has forbidden the purchase of “welded shipboard anchor and mooring chain” that is not manufactured in the United States (Poling, 2017b).

The nature of appropriations—that they constitute authority which enable, prescribe and constrain behavior—means that funds are not fungible. They should not even be thought of as money, but as legal limits on activities that eventually result in a flow of money. Most of the literature on UorL implicitly assumes the funds are fungible and can move seamlessly between requirements; one said it explicitly (Liebman & Mahoney, 2018, pp. 54–55). That may be true within a given account, but it is not true across accounts. Funds to maintain buildings on a military installation cannot be co-mingled with funds to perform the activities occurring within the buildings. Funds to pay pilots cannot be readily exchanged for funds to operate the aircraft the pilot flies, nor can it be used to purchase the aircraft itself or its weapons. Such transfers are possible but can take weeks or even months to process. This is a significant transaction cost that has not been adequately addressed in the literature.

Perhaps the most critical fiscal law affecting UorL is the Antideficiency Act (ADA). It has been a keystone of federal fiscal law for 150 years and has four key provisions (Candreva, 2019). The two most germane here prohibit obligating an amount in excess of what is available in an appropriation (31 U.S.C. §1341(a)(1)(A)) or in an apportionment (31 U.S.C. §1517(a)), which is a legal fraction of an appropriation. Where the ADA sets a ceiling on spending, it is compressed by the Impoundment Control Act (P.L. 93-344) that prohibits deliberately not spending. This little-known law made the news in early 2020 when the GAO concluded that by withholding military aid to Ukraine, the administration violated it (GAO, 2020). Combined, these two federal laws require a good faith effort to spend all appropriated dollars as specified but prohibit spending any more than that. One who obligates 99.9% of an appropriation before it expires is a hero; but one who spends 100.1% is a criminal and so is someone who deliberately only spends 95%.

An examination of the dates annual defense appropriations were enacted reveals that they were late 80% of the time in the 50-year period from FY1971–FY2020, and when they were late, they averaged 68 days (December; DeBruyne, 2020). There is much variation, and in an extreme case, FY2013 had a 176-day continuing resolution (CR)—the fiscal year was literally cut in half. Authorization Acts over those same 50 years were late 82% of the time and averaged 53 days. Thus, 80% of the time the DoD does not have its final legal authorities to spend until nearly 20% of the way into the fiscal year. Typically, the gap is filled with a CR, or what could be thought of as a mini appropriation that covers a brief period of time. This delays spending, in addition to a host of programmatic problems (Krause, 2017).

In the last decade, there were three CRs per year on average with a high of seven. Not only does this require certain actions to occur up to seven times instead of just once, final decisions about spending cannot be made until final authorities are received. A CR continues authorities granted in the prior year but does not allow for things planned for the current year that are not yet authorized. Given procurement lead times, it is no wonder spending gets compressed to the end of the fiscal year. And not only are contracts awarded late, they are initiated late. The only thing that cannot be done under a CR is to sign the long-term contract; it can still be initiated, market research done, and bids solicited. However, a study of contracting actions in the Marine Corps reveals those preliminary steps are often not even occurring (Letterle & Kantner, 2019).

In addition to appropriations are scores of other federal statutes that constrain and delay spending. These range from rules on improvements to family housing, limits on unspecified military construction, requirements to purchase prison-made products, the Competition in Contracting Act, and much more that further constrain and prescribe spending patterns.

<u>Administrative Rules</u>

Within the legal limits in which an agency operates, its leadership creates internal rules and policies further governing the work of management. In a government setting, these rules may be the implementing guidance for laws, they may regulate routine business, or they may be designed to move the organization in new and presumably better directions. Let's look at all three categories.

Implementing guidance can be found in documents like the Financial Management Regulations (FMR), a 16-volume, 7,421-page rulebook for those in the FM community (DoD, 2020). OUSD(C) issues about a dozen changes to the FMR every month. Volume 14, in particular, regulates the administrative control of funds, provides guidance on implementing fiscal law, the flow of funds from apportionment to allocations, requirements for internal controls, recording and reconciling transactions, and regulation of financial management IT systems. It provides guidance to components, commanders, supervisors, and managers regarding their responsibilities for avoiding ADA violations and other funds management concerns, including lists of examples of violations and definitions of various categories of expense.

In the category of routine business, annual budget submissions for operating accounts include a spend plan of anticipated obligations per month, a plan the program office is held accountable to meet. Additionally, for all appropriation titles, OUSD(C) has obligation rate targets that programs are evaluated against.

It is the responsibility of Navy commanders to "take all practicable steps to maintain their commands in a state of readiness to perform their missions" (Navy, 1990, Section 0704). Because the commander is evaluated on the readiness of that command, and not the Navy as a whole, there is an incentive for the commander to acquire and hoard resources so long as they can be potentially applied to increasing readiness. Elsewhere in the regulations, a commander is responsible for "economy" within the command, but that requirement calls for the commander to "require from his or her subordinates a rigid compliance with the regulations governing the receipt, accounting, and expenditure of public money and materials, and the implementation of improved management techniques and procedures" (Navy, 1990, Section 0802.3). The responsibility is to safeguard and account for money at the command level and below. It is more of an accountability requirement than an economy requirement. Navy regulations provide no incentive for commanders to minimize or optimize use of appropriations for the greater good of the overall institution. This applies to commanders all along the chain of command, from the ship, to the squadron, the type command, the fleet, and the Navy. There is little incentive for anyone in a command position to consider the financial needs of those hierarchically above or beyond their charge. These rules reinforce the differences between microbudgeting and macrobudgeting described in the next section.

With respect to better management, over the years, the services have attempted to address funds management through programs like the Navy's Financial Efficiency Index—a score of spending thoroughness assessed at the major command level (Navy, 2006). The Army's Directive 2016-16 entitled "Changing Management Behavior: Every Dollar Counts" that directs the elimination of UorL behavior (Department of the Army, 2016). Currently, the Navy has a Process to Improve Expenditure Efficiency (PIEE), focusing on expenditures more than obligations and addressing some of the root causes of lost opportunities (such as conservative cost estimating) improved cost estimates and monthly execution metrics (U.S. Navy, 2018). These programs focus attention on stewardship and spending quality.

<u>Organizational Structures</u>

This category of governance involves the interplay of roles and responsibilities in processes that affect UorL behavior. Included are funds holders, contracting officers, and program managers at multiple levels of the organization.

Earlier it was noted that CRs delay contracting actions. This is likely a consequence of the fact that many contracting offices refuse to proceed with a contracting action without first having a fund cite demonstrating that full funding is available. This is understandable when the contracting office is itself resource constrained, but this practice exacerbates the problem of late appropriations. Fund holders are conservative to avoid the possibility of an ADA violation, and contracting offices similarly fear “wasting” time on procurement actions that are tentative. The combined result is a late start to contracting actions and a compression of activity toward the end of the fiscal year.

Further, not all contracting offices take full advantage of the contracting flexibilities provided in law, favoring strong control over flexibility and speed. Competing contracts that could be awarded under simplified acquisition procedures further delays the obligation of funds. One contracting official, under a request for anonymity, confessed that “if not for the end of the fiscal year, I wonder if some contracts would ever get awarded. It is a looming 30 September that finally gets my supervisor to approve the contract award” (Anonymous, 2019).

Typically, program offices do not budget “management reserve,” yet program management best practices say that a reserve should be used (Frame, 2002; Project Management Institute [PMI], 2017). Similarly, the public budgeting literature cites the importance of having some slack in the budget (Hendrick, 2006; Schick, 2009; Tyler, 1993). If it cannot be budgeted for, then slack must be created. To create that slack, each layer tends to hold back money for a “rainy day.” If it does not rain, the funds come cascading down late in the year, causing a spending frenzy. If each layer in the hierarchy holds back 3%, and a manager is five layers down, only 86% reaches the bottom. The remaining 14% is sitting idle in a set of contingency funds until the managers in those higher layers feels comfortable enough to release the funds. Because it is late in the year, funds are distributed to those who can spend quickly rather than to those with the greatest need, exacerbating low-quality year-end spending spikes.

This hierarchical structure of funding flows is confounded by highly networked programs. Effective program management involves financial transactions among many other programs and offices, whether those are host–tenant arrangements, service providers, or suppliers of goods. Consider a program office hiring a team of engineers from a Naval Warfare Center. A level of workload is estimated in the budget and revised once final appropriations and allocations are made. Funds are obligated and monitored throughout the year. Fact of life changes occur, and toward the end of the year, the buyer and seller compute the final amounts required to complete the effort. Any excess is deobligated from that agreement and becomes available to put elsewhere, usually a new contract (or contract modification). Any shortage is covered by adding funds to the original obligation. These adjustments and opportunities add to the year-end spending spike but can hardly be considered procrastination or ineffective management.

Rubin (1993) discusses budget roles as forcing people into micro-budgeting or macro-budgeting strategies and processes. Micro-budgeting is about managing the funds for a given budget line or program and the tasks associated with that work from advocating for sufficient future funds to managing current funds per the written and unwritten rules and rewards. Macro-budgeting is the top-down and systematic perspective that seeks an efficient allocation across programs. The macro-budgeter does not want the micro-budgeter to waste funds because the macro-budgeter has an under-funded need elsewhere in the organization. The micro-budgeter is unwilling to give up those funds because of a fear of a future budget change, concerns about appearing to have mismanaged, or forfeiting being able to fund future contingencies or opportunities.

Institutional Norms

Norms are the unwritten rules that regulate behavior, the "collective awareness about the preferred, appropriate behaviors among a certain group of people" (Chung & Rimal, 2016, p. 3). In public budgeting, some of the prevalent norms are "bigger is better," mistrust, conservatism, gamesmanship, and consistency.

In government, the size of one's budget can be a source of prestige and has even been viewed as the public sector equivalent to a private sector manager maximizing profits (Niskanen, 1971). Because budget size is equated with success, leaders rarely propose that a function they are individually responsible for should receive a smaller budget on the grounds it is a lower priority in a new agency strategy. They see their role as advocating for their function and they expect any decisions to cut will be made by their superiors. As the opening quote of the paper revealed, even a legitimate and proper cut is viewed as punishment.

Each year, agencies present budgets to Congress and then testify that the amount is insufficient. Using a defense example, not all mission areas in the national security strategy can be met without risk. Readiness has shortfalls. Equipment needs to be recapitalized. Technologies need to be developed. The perpetual message to the legislature is that the amount requested is not sufficient to dominate our adversaries today nor in the future. As a result, if the department does not spend everything they receive, the department's credibility erodes. Spending it all, even inefficiently, is important for managing the optics of the budget.

When, for example, the Navy requests $5 billion for the flying hour program and Congress agrees and appropriates the funds, it creates an expectation. Congress expects the Navy to produce as much naval aviation readiness as $5 billion will buy. They do not expect the Navy to fly only the planned hours at minimal cost. Certainly, they expect the Navy to be efficient but if the Navy saves money executing the plan, then Congress wants more readiness. The balance should be used to increase aircrew proficiency by flying more hours, increase mission capable rates through further maintenance or by reducing a backlog of spare parts. Flying "touch-and-gos" in the final days of the fiscal year is not wasteful if it gives the pilots more cockpit time. Still, if the naval air forces cannot execute all the funding, the Navy could and should reprogram the excess funds to other higher priority uses and adjust future budgets as necessary to ensure they are executable. This requires the ability to plan ahead, collect and evaluate accurate financial data, with sufficient time to move the funds.

"Budgeting goes on in a world of reciprocal expectations that lead to self-fulfilling prophecies; agencies are expected to pad their requests to guard against cuts" (Wildavsky & Caiden, 2001, p. 52). While they were referring to agency relationships with OMB and the Congress, such behavior goes on at every level of the financial chain. It is frustrating to those in the superior position because they need accurate information for decision-making, but the level of mistrust is high. Everyone asks for 105% because they believe everyone else is doing so. If there will be a 5% cut, and the other guy starts at 105% and I start at 100%, I will not get my fair share. Budgets are linked to baselines and equities and so a managers' threshold budget task is to preserve the base and their objective is to grow it (Wildavsky & Caiden, 2001).

While they are aggressive in asking for budget, many managers as we have seen are conservative when allocating funds down the chain of command. They also conservatively obligate funds on contracts. To reduce the risk of falling short later, the maximum amount likely to be expended is obligated rather than the most likely amount. Most cost estimates provide a range of probabilities, but obligations are recorded at discrete dollar amounts. The risk-averse manage—or the manager who feels pressure to boost the program's obligation rate to meet a benchmark—might obligate conservatively and will later need to deobligate some of those funds and put them to other use. This could contribute to the end-of-year spending surge if downward adjustments are made late in the year, freeing up the excess amounts and contributing to the spending surge. They could also result in deobligations in the subsequent year, creating a lost opportunity.

Governance Summarized

UorL behavior is driven by the influences of law, administrative rules, organizational structures, and institutional norms. The legal push and pull to spend all the funds, but not a penny more are magnified by administrative rules and the norms of public budgeting. Organizational structures further cement this behavior by disaggregating roles which, when individually optimized, result in the UorL phenomenon. UorL behavior is not irrational but is the byproduct of reasonable adaptation by managers to their governance environment.

The Problem and Solutions

The empirical studies of UorL take the position that the year-end spending surge is a problem, per se. More qualitative views of it from the academic public budgeting literature see the surge as a symptom. Prior to considering remedies, it is essential to understand what should be remedied and as best one can, understand the causal influences.

UorL is a problem if the year-end spending surge is actually wasteful. The studies have shown that year-end spending is lower quality (Liebman & Mahoney, 2018), but not necessarily wasteful. Or they have shown theoretically that not spending all the funding could lead to more efficient spending (Hurley et al., 2014), but that study does not factor the political costs of failing to spend or the prohibition against deliberately refusing to spend. If the spending is merely lower priority, it may still be among the most efficient uses, especially when one considers the high cost of moving funds to other uses or the cost of non-use. This form of UorL is not a problem, *per se*.

At worst, a given program's spending surge may be a symptom of a correctable cause: poor planning, procrastination, hoarding, overly cautious allocations, or late appropriations. A root cause analysis is then necessary to explore the underlying problem. Poor planning, procrastination, hoarding, and overly cautious allocations are internal to the department and can be addressed through a redesign of rules, structures or norms. Late appropriations are out of the DoD's control and need to be addressed by Congress.

UorL is a problem if funds are obligated in an overly conservative fashion which results in deobligations in subsequent years resulting in a lost opportunity. In some cases, it may be necessary in order to comply with the Antideficiency Act or some service-specific policy. In these cases, the remedy could be an adjustment to policy (accept a higher level of risk) or law (adjust the terms of the Antideficiency Act).

The academic literature and practitioner groups have proffered several recommendations for mitigating or moderating UorL behavior. In this section, those recommendations are reviewed through the governance lens to evaluate their likely efficacy. Most of the recommendation in the literature involves a change of law and not a change to one of the other governance factors. After reviewing those ideas, four new ones are proposed.

Rollover Funds and Two-Year

The most commonly proposed policy change to address the UorL phenomenon is to alter the legal authorities to allow budget authority to roll over into the subsequent fiscal year. These proposals would allow for unobligated funds—sometimes limited to 3% or 5% of the annual appropriation—to remain available for obligation for 90 days into the next fiscal year. (Dietrichson & Ellegård, 2015; Hurley et al., 2014; Jones, 2005; Section 809 Panel, 2019) This a bad idea for a couple of reasons.

First and foremost, it fundamentally violates the core idea inherent in the budget: $X is sufficient for Z level of activity for 12 months. Rolling funds over sends a clear message that $X was excessive and logically invites a budget cut. Unless, of course, the program did not do Z level of activity, which raises the follow-on question: why not, you had the money? For every dollar that rolls over, that is a dollar of next year's budget that is apparently not needed. It would actually help to objectively quantify and justify a cut to the following year's budget.

Second, if a program or the entire agency cannot effectively manage from October to September, why should one assume that the agency can manage any better from October to the following December?

Third, such a plan confounds fiscal law questions. For example, on what may one obligate FY20 funds in the first quarter of FY21? During that first quarter, there would exist two appropriations available for the same object at the same time. That violates a fundamental principle of fiscal law that there is one proper appropriation for a given object of expense. RDT&E struggles with this today so the pressure is to obligate as much as possible the first year and that in the second year, those funds may only be used for efforts specifically enumerated in the first year of the appropriation. There is no reason to believe that rolled over O&M would be treated any differently. Thus, it is reasonable to expect that comptrollers and fiscal lawyers would severely limit what could be done during the first quarter of a subsequent year with prior year O&M funding.

A companion idea to rollover funds is to budget two-year money instead of one-year money, but that only defers the problem to September 30, 20XX+1; it does not eliminate the problem. Because twice as much money has to be managed over twice as long, it would likely exacerbate the management issues and intensify the legal ones.

Some point to the state of Oklahoma as a success story for rollover funds, but in their case what rolled over was the cash balance to pay for encumbrances already made; that is not a concern for DoD since we have that authority already (Douglas & Franklin, 2006).

<u>Adjust Appropriation Lifespan to Account for Continuing Resolutions</u>

Another idea for adjusting authorities to cope with present realities was proposed by the Section 809 panel to deal with years in which there are continuing resolutions. That idea is to allow for an annual appropriation to be valid for one year starting from the date it was fully enacted, or October 1, if enacted prior to October 1 (Section 809 Panel, 2019, p. 232). Imagine a fiscal year begins with a CR that runs the average duration and the full appropriation is passed on December 8. Per this recommendation, that ultimate appropriation would then be valid for obligation until December 7 of the following year.

This idea is also problematic. Not only does it have the problem of overlapping appropriations noted above, it would motivate Congress to either prorate the ultimate appropriation in light of the funding used under the CR (thereby further slowing down the process of enacting the ultimate appropriation), or to take the amount used under the CR into consideration when appropriating funding the subsequent year. Thus, it would require the DoD to take the additional funding into consideration when writing the budget for the subsequent year. This would not lessen the impact of CRs, but could conceivably exacerbate them by having Congress appropriate funds for a partial year or add an administrative burden by having the DoD budget for a partial year. Perhaps, most importantly, this would create havoc when analyzing past spending patterns where annual outlays were not actually a full year.

Then there is the practical problem of each fiscal year's funds expiring on different days. A typical acquisition program office with RDT&E and Procurement accounts is already juggling a minimum of 15 appropriations (two active R&D and five expired plus three active procurement and five expired). If each annual pair expired on different days, it raises the risk of ADA violations. It is currently tidy that all accounts expire on September 30, yet that is problematic; imagine if most of them expire on a different date.

This idea is motivated by a desire to lessen the harm of future political process failures by institutionalizing that failure. That seems like an odd remedy. As noted earlier, over the last 50 years, appropriations have been late 80% of the time (DeBruyne, 2020). An institution like the DoD that prides itself on planning, flexibility, and resiliency should have figured out by now how to handle such a routine occurrence. It should not need a remedy. Second, it is the antithesis of the military's ethos to surrender to failure. Third, it would be better for both the legislature and agency to continue to feel the pain of CRs as a disincentive to such failures. To lessen the impact of CRs and government shutdowns, the consequences are reduced so the probability of future late appropriations or shutdowns increases. Better to go in the opposite direction and increase the pain of failure to induce all parties to follow the process as designed and adhere to the budget calendar.

<u>Let Programs Keep the Savings</u>

To help mitigate the belief that losing funding–even for a legitimate reason–is a punishment, some have proposed allowing those who are good stewards to keep part of the savings as an incentive (Jones, 2005; Melese, 1997). An Army directive said, in part, "Ensure that organizations are rewarded for finding better ways of operating by allowing them to keep and redirect savings to validated command priorities" (Army, 2016). This, too, is a bad idea for several reasons.

First, if the organization has other valid priorities, there are ample incentives and opportunities (such as UorL beliefs!) to redirect the funds themselves and Army headquarters would never know about the savings. Because of that, the fact the savings reached the attention of Army leaders is evidence the organization does not actually have a validated priority. Second, sound economics, effective budgeting practices, good stewardship, and a portfolio view of the agency all say that if Organization A finds a better way to operate that saves money, the excess should go to the Army's highest priority unfunded requirement, which obviously is not at Organization A since they met their mission under budget. The commander of Organization A should definitely be rewarded, but giving the command money it has clearly demonstrated it does not need is just a different form of waste. Third, it perpetuates the misguided belief that a bigger budget is always better. Fourth, good stewardship decisions should be the norm, without the need for a gain-sharing arrangement. Perhaps most importantly, unused funds cannot be saved because there is nothing to save. As noted in the governance section, there is no money, only legal authorities. Dan Williams echoes that this idea "mistakes reward in the private sector setting with what a public sector organization is and does. Rewarding an agency with money is not to give it an asset. It gives it discretion over spending … rewarding efficiency with discretion seems weird" (Jones, 2005, p. 147).

Having considered the deficiencies with the literature's remedies for the UorL phenomenon, I offer a few more. They are not perfect but each lacks the negative side effects of the proposals already evaluated. Others address other parts of the governance framework.

<u>Adjust the Antideficiency Act</u>

Rather than allow unobligated funds to roll over, a better option would be to adjust the ADA to a form similar to what it was in the late 1800s when it forbade over-expending an appropriation rather than over-obligating one. This would allow a modest amount of over-obligation during the period of obligation availability. It was noted earlier that a logical consequence of the ADA is that a certain percentage of an appropriation will be de-obligated after the appropriation expires. If comptrollers were allowed to obligate funds in excess of the amount provided, but well within the historical rate of de-obligation, then the agency will likely use more of the appropriated budget authority before the appropriation lapses. For example, if an agency typically ends the year with 99% obligations, but routinely finds themselves at 97% obligated one year after the appropriation expires due to predictable rates of deobligation, then the agency should be permitted to obligate 102% of the appropriated amount with the reasonable expectation that deobligations will bring them below 100% before the appropriation expends or lapses. This rule would obviate much of the perceived need to hold back funds and would release a greater percentage of funds earlier in the year to more productive use. Such a rule would permit higher utilization rates of appropriations without undue risk of deficiency appropriations. A ban on deficiency appropriations to accompany this idea would serve to temper the risk tolerance of agencies.

Adjust the Reprogramming Authorities & Process

This recommendation comes in two forms. In the first, Congress could adjust both the process and thresholds for reprogramming in the fourth quarter of the fiscal year when there is less time for a regular prior approval action. The process for reprogramming could be expedited by limiting defense committees' review time. For example, if there are no objections within 10 session days, the reprogramming is automatically approved. Additionally, Congress could raise the threshold in the fourth quarter to allow for a greater number of transfers to use below-threshold reprogramming authorities.

Second, Congress could change the law to permit the reprogramming of unobligated balances from open but expired appropriations into appropriations that are unexpired. For example, this would permit during FY2021 the reprogramming of FY2020 O&M funds into FY2020 RDT&E or Procurement funds. This would "resurrect" expired funds in accounts that are still open at the Treasury and would allow for the use of the inevitable unobligated balances of expired accounts. It was noted earlier that upwards of $4 billion of O&M is deobligated before it lapses. If those expired funds could be reprogrammed to unexpired shipbuilding, the Navy could eliminate the "completion of prior year shipbuilding" budget line and have more for other projects.

Build Transparency and Trust

If the principal cause of unused budget authority is a lack of trust or mismanagement, then a change of law is an odd remedy. The remedy should address other governance factors to correct the issue of trust or to promote better management. As described earlier, when every layer in the chain of command creates a reserve, the amount becomes excessive. The reserve should be commensurate with the risk being borne. A good cure for the year-end spending spike is to allocate more of the appropriation earlier in the year, build more transparency through consolidation of accounting systems, and then hold a single, centrally-managed reserve.

For this to work, the cultural attitudes must change. Those holding the centrally managed reserve, the assistant secretary for financial management perhaps, need to assure the major commands and individual programs that contingencies can be covered. The more of the appropriation that is released earlier in the year to the ultimate spender, the more effective the spending will be because managers have more time to plan.

Manage More Effectively

With respect to promoting better management, the most direct remedy is to anticipate the phenomenon of year-end spending spikes and to manage them better. Should a command routinely receive sweep-up money, then the managers should plan ahead for it and tee up purchases at varying amounts for things that are useful. They should buy ahead some of next year's needs within the bounds of the bona fide needs rule. They should have a list of unfunded, medium priority needs that are not urgent and would not normally be funded with initial allocations. This list would include things like buying back deferred maintenance, upgrades of systems that would benefit from improvement, service contracts for beneficial but not critical work, or refreshing technology. For this to work effectively, the department needs to expand contracting capacity and create incentives for contracting officers to begin work prior to receipt of funds.

Concluding Thoughts

Use or Lose is not a problem, *per se*, and it is not simply an agency problem. Where there is identifiable waste, the root causes of that waste should be identified and a remedy designed to counteract the cause. Changing the law is not the way to fix mismanagement, misaligned organizational structures, or misallocations; other remedies are more appropriate. But where the law is the cause of lost opportunities, it may be necessary to change it.

This paper critically looked at UorL and offered a more precise definition, examined whether there is evidence for it, and looked beyond the economics of agency to all the various factors of governance that affect UorL behavior. There is ample evidence of the phenomenon, and this paper provided additional insights into causal factors. Those insights led to some new ideas for remedies.

References

Baumann, S. (2019). Putting it off for later: Procrastination and end of fiscal year spending spikes. *The Scandinavian Journal of Economics, 121*(2), 706–735.

Candreva, P. J. (2017). *National defense budgeting and financial management: Policy & practice*. IAP.

Candreva, P. J. (2019). The federal Antideficiency Act at 150—Where do we stand? *Public Budgeting & Finance, 39*(4), 75–93.

Chung, A., & Rimal, R. N. (2016). Social norms: A review. *Review of Communications Research*, 4, 1–28.

DeBruyne, N. F. (2020). *Defense authorization and appropriations bills: FY1961–FY2020* (CRS Report No. 98-756). Washington, DC: Congressional Research Service.

Defense Acquisition University (DAU). (2017). *OUSDC rule-of-thumb acquisition obligation and expenditure rates*. Retrieved from https://www.dau.mil/tools/Lists/DAUTools/Attachments/292/OSD%20(C)%20Color%20Rule-of-Thumb%20Acq%20Obligation%20and%20Expenditure%20Rates.pdf.

Department of the Army. (2016, April 15). *Changing management behavior: Every dollar counts* (Army directive 2016-16). Retrieved from https://www.army.mil/e2/c/downloads/441522.pdf

DoD. (2019). Budget execution: Implemented reprogramming actions—FY2019. Retrieved from https://comptroller.defense.gov/Budget-Execution/ReprogrammingFY2019/

DoD. (2020). Financial management regulations. Retrieved from https://comptroller.defense.gov/FMR/

Dietrichson, J., & Ellegård, L. M. (2015). Institutions improving fiscal performance: Evidence from Swedish municipalities. *International Tax and Public Finance, 22*(5), 861–886.

Douglas, J. W., & Franklin, A. L. (2006). Putting the brakes on the rush to spend down end-of-year balances: Carryover money in Oklahoma state agencies. *Public Budgeting & Finance, 26*(3), 46–64.

Eichenauer, V. Z. (2017, January). December fever in public finance. In *PEIO (Political Economy of International Organizations), 10th Annual Conference on The Political Economy of International Organizations, Berne* (pp. 12–14).

Fichtner, J. J., & Greene, R. (2014, September 30). *Curbing the surge in year-end federal government spending: Reforming "use it or lose it" rules*. Washington, DC: George Mason University's Mercatus Center.

Frame, J. D. (2002). *The new project management: Tools for an age of rapid change, complexity, and other business realities*. San Francisco, CA: Jossey-Bass.

GAO. (2014). *Standards for internal control in the federal government.* Washington, DC: Author.

GAO. (2020, January 16). *Office of Management and Budget—Withholding of Ukraine security assistance* (GAO B-331564). Washington, DC: Author.

H.R. Rep. No. 115-952. (2018). *Conference report to accompany Department of Defense appropriations act for the fiscal year ending September 30, 2019.* Washington, DC: Government Printing Office.

Heinrich, C. J., & Lynn, L. E. (Eds.). (2000). *Governance and performance: New perspectives*. Washington, DC: Georgetown University Press.

Hendrick, R. (2006). The role of slack in local government finances. *Public Budgeting & Finance, 26*(1), 14–46.

Hurley, W. J., Brimberg, J., & Fisher, B. (2014). Use it or lose it: On the incentives to spend annual defence operating budgets. *Defence and Peace Economics, 25*(4), 401–413.

Jones, L. R. (2005). Outyear budgetary consequences of agency cost savings: International public management network symposium. *International Public Management Review, 6*(1), 139–168.

Jones, L. R., & McCaffery, J. L. (2008). *Budgeting, financial management, and acquisition reform in the U.S. Department of Defense*. IAP.

Krause, H. (2017). *Budget Issues: Budget uncertainty and disruptions affect timing of agency spending* (GAO-17-807T). Washington, DC: Government Accountability Office.

Letterle, K. W., & Kanter, P. A. (2019). *An analysis of contracting activity purchase request acceptance lead time for USMC using unit acquisitions under the simplified acquisitions threshold* (Master's thesis, Naval Postgraduate School). Retrieved from https://calhoun.nps.edu/handle/10945/64005

Liebman, J. B., & Mahoney, N. (2018). *Do expiring budgets lead to wasteful year-end spending? Evidence from federal procurement* (NBER Working Paper No. 19481). Cambridge, MA: National Bureau of Economic Research.

Melese, F. (1997). Gain-sharing, success-sharing and cost-based transfer pricing: A new budgeting approach for the Department of Defense (DoD). *Military Operations Research*, 23–50.

Niskanen, W. A. (1971). *Bureaucracy and representative government*. New Brunswick, NJ: Transaction Publishers.

Poling, S. A. (2017a). *U.S. Forest Service—Line-item appropriation for acquiring aircraft for the next-generation airtanker fleet* (GAO B-328323). Washington, DC: GAO.

Poling, S. A. (2017b). *U.S. Army Corps of Engineers—Statutory restrictions on the use of appropriated funds for welded shipboard anchor and mooring chain* (GAO B-328485). Washington, DC: GAO.

Project Management Institute. (2017). *A guide to the project management body of knowledge (PMBOK guide).* Newtown Square, PA: Author.

Roum, C. J. (2007). *The mature of DoD reprogramming* (Master's thesis, Naval Postgraduate School). Retrieved from https://calhoun.nps.edu/handle/10945/3406

Rubin, I. S. (1993). *The politics of public budgeting: Getting and spending, borrowing and balancing.* Chatham, NJ: Chatham House.

Saturno, J. V., & Tollestrup, J. (2016). *Continuing resolutions: Overview of components and recent practices* (CRS Report No. R42647). Washington, DC: Congressional Research Service.

Schick, A. (2009). Budgeting for fiscal space. *OECD Journal on Budgeting, 9*(2), 7–24.

Section 809 Panel. (2019). *Report of the advisory panel on streamlining and codifying acquisition regulations, volume 3*. Arlington, VA: Author. Retrieved from https://section809panel.org/wp-content/uploads/2019/01/Sec809Panel_Vol3-Report_JAN19_part-1_01-28.pdf.

Tyler, C. (1993). Local government reserve funds: Policy alternatives and political strategies. *Public Budgeting & Finance, 13*(2), 75–84.

United States General Accounting Office, Office of the General Counsel. (2004). *Principles of federal appropriations law* (vol. I). Washington, DC: Government Printing Office.

United States Navy. (1990). U.S. Navy regulations. Retrieved from https://www.secnav.navy.mil/doni/navyregs.aspx

United States Navy. (2006, January 4). *Financial efficiency index performance metric* [Memorandum]. Washington, DC: Assistant Secretary of the Navy (Financial Management and Comptroller).

United States Navy. (2018). *Process to improve expenditure efficiency* [Briefing]. Washington, DC: Assistant Secretary of the Navy (Financial Management and Comptroller). Retrieved from https://www.washington-asmcnationalcapitalregionpdi.org/app/download/7247434323/Process+to+Improve+Expenditure+Efficiency.pdf

Wildavsky, A., & Caiden, N. (2001). *The new politics of the budgetary process*. New York, NY: Longman.

Acquisition Research Program
Graduate School of Defense Management
Naval Postgraduate School
555 Dyer Road, Ingersoll Hall
Monterey, CA 93943

www.acquisitionresearch.net